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**Abstract**

Defect analysis of a semiconductor die is enhanced in a manner that makes possible the viewing of spatial manifestations of the defect from virtually any angle.

According to an example embodiment of the present invention, substrate is removed from

5 a semiconductor die while simultaneously obtaining images of the portions of the die from which substrate is being removed. The images are taken at various points in the substrate removal process, recorded and combined together to form a three-dimensional image of selected portions of the die. The image is then used to view the selected portions, and the nature of one or more defects therein are analyzed.